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Vascular Medicine

OCULAR SARCOIDOSIS IS ASSOCIATED WITH ENDOTHELIAL DYSFUNCTION AND ARTERIAL STIFFNESS IN SARCOIDOSIS PATIENTS

Poster Contributions
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Session Title: New Findings in Vascular Inflammation and Endothelial Function
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Background: Ocular involvement occurs in Sarcoidosis (Sar) patients mainly in the form of uveitis. The study was designed to determine if uveitis in Sar patients is associated with impairment of vascular function.

Methods: We enrolled 82 Sar patients and 77, age and sex matched, control subjects (Cl). Sar patients were divided in those with ocular Sarcoidosis (OS) and in those without ocular Sarcoidosis (WOS). Endothelial function was evaluated by flow-mediated dilatation (FMD). Pulse wave velocity (PWV) was measured as an index of aortic stiffness and augmentation index (AIx) as a measure of arterial wave reflections.

Results: Although there was no significant difference in sex, age and mean arterial pressure, patients with OS compared to WOS patients and Cl subjects had impaired FMD (4.50±2.23% vs. 6.79±2.05% vs. 8.31±3.50%, p<0.001), increased AIx (24.38±9.34% vs. 20.63±10.89% vs. 17.49±12.10%, p=0.02) and increased PWV (8.42±2.1m/s vs. 7.26±1.20m/s vs. 7.09±1.59m/s, p=0.001). Interestingly, impaired FMD in Sar patients was associated with increased Odds of ocular involvement [Odds: 1.69, 95% CI (1.23, 2.72), p=0.001] independently from possible confoundrs (age, sex, smoking habits, arterial hypertension, dyslipidemia). More precisely ROC curve analysis revealed that FMD had a significant diagnostic ability for the detection of OS (AUC=0.77, p<0.001) with a sensitivity of 79% and a specificity of 68% for an FMD value below 6.00%.

Conclusion: In the present study we have shown that ocular involvement in Sar patients is associated with impaired endothelial function and increased arterial stiffness. These results strengthens the vascular theory that considers uveitis a consequence of vascular dysfunction in Sar patients and reveals a possible clinical important use of endothelial function tests.